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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,731	01/28/2004	Gregory H. Fasullo	VPI 2867000	3468
21909	7590	09/29/2005		
CARR LLP 670 FOUNDERS SQUARE 900 JACKSON STREET DALLAS, TX 75202			EXAMINER CHERRY, STEPHEN J	
			ART UNIT 2863	PAPER NUMBER

DATE MAILED: 09/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

88

**Office Action Summary**

Application No.

10/766,731

Applicant(s)

FASULLO ET AL.

Examiner

Stephen J. Cherry

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-13, and 30-33 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 4,344,479 to Bailey.

Claim 1 recites, as disclosed by Bailey:

1. An apparatus for adjusting fan speed, comprising: a fan; an angular speed sensor, wherein the angular speed sensor measures at least one angular speed of the fan ('479, fig. 28, 577); an energy unit, wherein the energy unit provides energy output to the fan ('479, fig. 28, 575); and a feedback unit, wherein the feedback unit: at least compares the at least one angular speed to a set angular speed level ('479, fig. 28, 574); and at least instructs the energy unit to adjust the energy output to the fan to at least substantially provide the set angular speed level ('479, fig. 28, signal from 574).

Claim 2 recites, as disclosed by Bailey:

2. The apparatus of claim 1, wherein the angular speed sensor further comprises a tachometer ('479, fig. 28, 577).

Claim 3 recites, as disclosed by Bailey:

3. The apparatus of claim 1, wherein the angular speed sensor further comprises a flow meter ('479, fig. 28, 572).

Claim 4 recites, as disclosed by Bailey:

4. The apparatus of claim 1, wherein the fan further comprises: a plurality of fan blades ('479, fig. 1, 38); and an electric motor at least coupled to the plurality of fan blades ('479, fig. 1, 30).

Claim 5 recites, as disclosed by Bailey:

5. The apparatus of claim 4, wherein the energy unit further comprises an adjustable electrical power supply ('479, fig. 28, 575).

Claim 6 recites, as disclosed by Bailey:

6. The apparatus of claim 1, wherein the fan further comprises a plurality of fan blades ('479, fig. 1, 38).

Claim 7 recites, as disclosed by Bailey:

7. The apparatus of claim 6, wherein the energy unit further comprises: a mechanical engine at least coupled to the plurality of fan blades ('479, fig. 1, 30); and an engine control unit, wherein the engine control unit at least controls mechanical energy output of the mechanical engine ('479, fig. 28, 575).

Claim 8 recites, as disclosed by Bailey:

8. A feedback unit for adjusting fan speed, comprising: an angular speed sensor, wherein the angular speed sensor measures at least one angular speed of a fan ('479, fig. 28, 577); an energy unit, wherein the energy unit

Art Unit: 2863

provides energy output to the fan ('479, fig. 28, 575); a comparison unit, wherein the comparison unit at least compares the at least one angular speed to a set angular speed level ('479, fig. 28, 574); and an instruction unit, wherein the instruction unit at least instructs the energy unit to adjust the energy output to the fan to at least provide the set angular speed level ('479, fig. 28, 574).

Claim 9 recites, as disclosed by Bailey:

9. The feedback unit of claim 8, wherein the angular speed sensor further comprises a tachometer ('479, fig. 28, 577).

Claim 10 recites, as disclosed by Bailey:

10. The feedback unit of claim 8, wherein the angular speed sensor further comprises a flow meter ('479, fig. 28, 572).

Claim 11 recites, as disclosed by Bailey:

11. The feedback unit of claim 8, wherein the fan further comprises: a plurality of fan blades ('479, fig. 1, 38); and an electric motor at least coupled to the plurality of fan blades ('479, fig. 1, 30).

Claim 12 recites, as disclosed by Bailey:

12. The feedback unit of claim 11, wherein the energy unit further comprises an adjustable electrical power supply ('479, fig. 28, 575).

Claim 13 recites, as disclosed by Bailey:

13. The feedback unit of claim 8, wherein the energy unit further comprises a mechanical engine at least coupled to the fan ('479, fig. 1, 30).

Claim 30 recites, as disclosed by Bailey:

30. A method of correcting a fan's angular speed, comprising: measuring an angular speed of the fan ('479, fig. 28, 577); comparing the angular speed of the fan to a set fan speed ('479, fig. 28, 574); adjusting energy output to the fan to at least achieve the set fan speed ('479, fig. 28, signal from 574).

Claim 31 recites, as disclosed by Bailey:

31. The method of claim 30, wherein step of measuring the angular speed of the fan further comprises measuring the Revolutions Per Minute (RPMs) of the fan ('479, fig. 28, 577).

Claim 32 recites, as disclosed by Bailey:

32. The method of claim 30, wherein the step of adjusting the energy output to the fan further comprises adjusting electrical energy output to an electric motor at least coupled to a plurality of blades ('479, fig. 28, 576).

Claim 33 recites, as disclosed by Bailey:

33. The method of claim 30, wherein the step of adjusting the energy output to the fan further comprises adjusting mechanical energy output of the mechanical engine at least coupled to a plurality of blades ('479, fig. 1, 30).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14-29, 34-36 and 41-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,344,479 to Bailey in view of U.S. Patent 4,536,689 to Davidson and further in view of U.S. Patent 4,839,852 to Knutsen.

The claims recite, as disclosed by Bailey:

measuring an angular speed of the fan ('479, fig. 28, 577); comparing the angular speed of the fan to a set fan speed ('479, fig. 28, 574); adjusting energy output to the fan to at least achieve the set fan speed ('479, fig. 28, signal from 574).

wherein step of measuring the angular speed of the fan further comprises measuring the Revolutions Per Minute (RPMs) of the fan ('479, fig. 28, 577).

wherein the step of adjusting the energy output to the fan further comprises adjusting electrical energy output to an electric motor at least coupled to a plurality of blades ('479, fig. 28, 576).

wherein the step of adjusting the energy output to the fan further comprises adjusting mechanical energy output of the mechanical engine at least coupled to a plurality of blades ('479, fig. 1, 30).

However Bailey does not detect failures.

The claims further recite comparing energy output and speed to predict failure, as disclosed by Davidson (see figure, motor rate and motor current used in comparison to output fault detection signal).

However Bailey nor Davidson explicitly implementing the disclosed inventions in a computer using a computer readable media.

The claims further recite a computer program product on a medium as disclosed by Knutsen ('852, col. 1, line 12).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the invention of Bailey fault detection of Davidson and with the programmable controller of Knutsen to allow the control functions to be implemented in a small, low cost package ('852, col. 1, line 12 and line 41) and to avoid unsafe conditions in operation of motor feedback loops ('689, col. 1, line 21).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen J. Cherry whose telephone number is (571) 272-2272. The examiner can normally be reached on M-F 8:00-4:30.

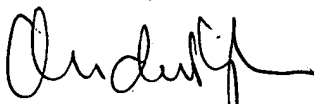


Art Unit: 2863

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SJC

  
MICHAEL NGHIEM  
PRIMARY EXAMINER  
9/27/08